

## REMARKS

Applicants would like to thank the Examiner for careful consideration given this Application. Claims 1 and 2 are pending in this Application. Claim 1 has been amended and Claims 3-5 have been cancelled. Support for all amendments can be found in the Specification and Claims as originally filed. No new matter has been added.

### Rejections under 35 U.S.C. 112

Claims 1-5 stand rejected under 35 U.S.C. 112, first paragraph for failing to comply with the written description requirement.

The Examiner alleges that the term “weighted subtraction” is not described in the specification in such a way as to reasonably convey to one of ordinary skill in the art that the Applicants had possession of the claimed invention because a lack of definition of the various parameters render the discussion unclear. Applicants respectfully disagree.

Applicants submit that “weighted subtraction” is a term of art and would be known by the skilled artisan. Additionally, each of the parameters used are recited in the Specification as originally filed in Para 0059 to 0075. For the Examiner’s convenience, the parameters as defined in Para 0059 and subsequent paragraphs are defined below:

$f_i$ - refers to the factors;  $f_{PB}$ ,  $f_{PS}$ ,  $f_{PAN}$ ,  $f_{STY}$ , and  $f_{ACN}$ ;

$I_{PB}(v)$ ,  $I_{PS}(v)$ ,  $I_{PAN}(v)$ ,  $I_{STY}(v)$ , and  $I_{ACN}(v)$ - refer to the digitalized Raman spectra of individual components; and

$I_K(v)$ - refers to the actual reactor content.

The factors  $f_{PB}$ ,  $f_{PS}$ ,  $f_{PAN}$ ,  $f_{STY}$ ,  $f_{ACN}$  and  $f_K$  are determined from the known components,  $I_{PB}(v)$ ,  $I_{PS}(v)$ ,  $I_{PAN}(v)$ ,  $I_{STY}(v)$ ,  $I_{ACN}(v)$  and  $I_K(v)$  using the equation of Para 0059 and calibration factors  $K_{PB}$ ,  $K_{PS}$ ,  $K_{PAN}$ ,  $K_{STY}$ , and  $K_{ACN}$  are determined using the equation of Para 0059 from mixtures of known ratios, and these factors are used to determine:

$Q_{PB}$ ,  $Q_{PS}$ ,  $Q_{PAN}$ ,  $Q_{STY}$ , and  $Q_{ACN}$ - quotients relative to polybutadiene;

$W_{PB}$ ,  $W_{PS}$ ,  $W_{PAN}$ ,  $W_{STY}$ , and  $W_{ACN}$  are corrected ratios of components to polybutadiene based on calibration factors; and

$M_{PB}$ ,  $M_{PS}$ ,  $M_{PAN}$ ,  $M_{STY}$ , and  $M_{ACN}$  are the quantity of each component in the reactor.

Accordingly, each of the parameters used in the equations of Para 0059 are defined in the Specification as filed. Reconsideration and withdrawal of the Examiner's rejection is respectfully requested.

Claims 1-5 stand rejected under 35 U.S.C. 112, second paragraph as being indefinite for failing to particularly point out and distinctly claim the subject matter which the Applicants regard as the invention.

The Examiner alleges that is not clear on what materials the weight percentage of Claims 1 and 3 is based and questions whether copolymer is meant. Independent Claim 1 has been amended to recite that the copolymer is acrylonitrile and to clarify that the percent is relative to the total weight of components (A) and (B) thereby attending to the Examiner's rejection.

The Examiner further alleges that the term "weighted subtraction" is not defined in the specification as filed and is unclear. Applicants submit that "weighted subtraction" is a term known in the art. Moreover, Applicants clearly define what is meant by weighted subtraction and provide a detailed description of the methods by which Applicants perform the weighted subtraction in Para 0058 to 0075 as detailed herein above. Therefore, "weighted subtraction" is clearly defined in the specification as filed.

Finally, the Examiner alleges that the term "desired" is subjective and unclear. Applicants have removed the term desired from the amended claims thereby attending to the Examiner's rejection.

Accordingly, Applicants have attended to the Examiner's rejections and respectfully request withdrawal of the rejections under 35 U.S.C. 112, second paragraph.

### Rejections under 35 U.S.C. 102

Claims 1-5 stand rejected under 35 U.S.C. 102(e) as being anticipated by U.S. Patent Publication No. 2003/0119199 and the corresponding PCT Publication No. WO 03038415 to Wolf et al (hereinafter "Wolf").

Claims 1-5 stand rejected under 35 U.S.C. 102(e) as being anticipated by U.S. Patent Publication No 2003/0130433 and under 35 U.S.C. 102(a) as being anticipated by the corresponding PCT Publication No. WO 03038414 to Wenz et al. (hereinafter "Wenz").

Applicants concurrently submit herewith a certified translation of German Priority Document No. 103 04 817.0 filed on February 6, 2003 thereby perfecting Applicants claim of priority to this document and establishing a priority date for the pending Application of February 6, 2003. Accordingly, the Examiner's rejections under 35 U.S.C. 102(e) and 35 U.S.C. 102(a) by Wolf and Wenz are rendered moot. Withdrawal of the Examiner's rejections is respectfully requested.

### Double Patenting

Claims 1-5 stand provisionally rejected on the grounds of nonstatutory double patenting over Claims 1-15 of co-pending Application No. 10/281,345, and Claims 1 – 12 of Application No. 10/281,597 now U.S. Patent No. 7,122,379.

Applicants submit that Application No. 10/281,345 is pending. Allowable subject matter, notwithstanding the provisional obviousness-type double patenting rejection, has not been indicated in any of the pending applications. Where a provisional rejection under the judicially created doctrine of obviousness-type double patenting is named between two applications, MPEP § 104(I)(B) states that "if the 'provisional' double patenting rejection in one application is the only rejection remaining in that application, the examiner should then withdraw that rejection and permit the application to issue as a patent, thereby converting the provisional rejection in the other application in a double patenting rejection at the time the one application issues as a patent." Here, it is not evident which of the pending applications will become allowable first, and any action by

Applicants or the Examiner with this regard is premature. Accordingly, Applicants request reconsideration of the Examiner's rejection.

With regard to U.S. Patent No. 7,122,379, a Terminal Disclaimer is concurrently submitted herewith. Accordingly, withdrawal of the Examiner's rejection is respectfully requested.

#### Rejection under 35 U.S.C. 103

Claims 1-5 stand rejected under 35 U.S.C. 103(a) as being unpatentable over British Patent No. GB 1,200,414 to Monsanto in view of U.S. Patent No. 6,278,518 to Schrof et al. (hereinafter "Schröf") and/or U.S. Patent Publication No. 2002/0156205 to Long et al. (hereinafter "Long").

It is well settled that to establish a *prima facie* case of obviousness, the USPTO must satisfy all of the following requirements. First, the prior art relied upon, coupled with the knowledge generally available in the art at the time of the invention, must contain some suggestion or incentive that would have motivated the skilled artisan to modify a reference or to combine references. *In re Fine*, 5 USPQ2d 1596, 1598 (Fed. Cir. 1988). Second, the proposed modification must have a reasonable expectation of success, as determined from the vantage point of one of ordinary skill in the art at the time the invention was made. *Amgen v. Chugai Pharmaceutical Co.* 18 USPQ 2d 1016, 1023 (Fed Cir, 1991), *cert. denied* 502 U.S. 856 (1991). Third, the prior art reference or combination of references must teach or suggest all of the limitations of the claims. *In re Wilson*, 165 USPQ 494, 496, (CCPA 1970).

The Examiner concedes that Monsanto describes a process for producing ABS in which monomer addition is controlled but does not disclose the use of Raman spectroscopy for monitoring the reaction, and alleges that it would have been obvious to monitor the process of Monsanto using Raman spectroscopy as described by Schröf and/or Long. Applicants respectfully disagree.

Monsanto fails to teach or suggest a method by which the concentration of styrene monomer is held at a selected value of less than 12% based on the total polybutadiene and fails to teach or suggest a method by which the concentration of

styrene is used to determine which alterations should be made to the reaction. Moreover, because the concentration of only styrene is monitored and retained at less than 12% and not the total monomer concentration as taught by Monsanto, the total concentration (styrene and acrylonitrile) of unpolymerized monomers may be much higher in the reaction of amended independent Claim 1 than the 10% to 20% taught by Monsanto. Schrof and Long fail to cure these deficiencies.

Accordingly, Monasanto in combination with either Schrof and/or Long fail to teach or suggest all of the limitations of amended independent Claim 1, and this combination of references fails to render amended independent Claim 1 obvious. Reconsideration and withdrawal of the Examiner's rejection is respectfully requested.

Claims 1-5 stand rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 4,137,600 to Kishida et al. (hereinafter "Kashida") in view of Schrof and/or Long.

The Examiner alleges that Kishida discloses a process for producing ABS in which the concentration of reactants is monitored and adjusted, but does not disclose monitoring the reaction using Raman spectroscopy. Therefore, it would be obvious to monitor the reaction of Kishida with Raman spectroscopy as taught by Schrof and/or Long. Applicants respectfully disagree.

First and foremost, Kishida fails to teach or suggest a method for making an ABS polymer composed of styrene, acrylonitrile, and polybutadiene because Kishida teaches the preparation of a multi-layer polymer and not an ABS polymer. Schrof and/or Long fail to cure this deficiency.

Moreover, the method by which Kishida prepares the multi-layer polymer provides that monomers for intermediate layers are added to the polymerization reaction based on the polymerization rate of the previously added monomer (column 7, lines 51-59). Thus, as the polymerization of one layer is completed and the monomer concentration goes to 0%, a different monomer for the next layer is added. Therefore, Kishida fails to teach or suggest a method by which the concentration of styrene is held

constant at a selected value throughout polymerization as recited in amended independent Claim 1. Schrof and/or Long fail to cure this deficiency.

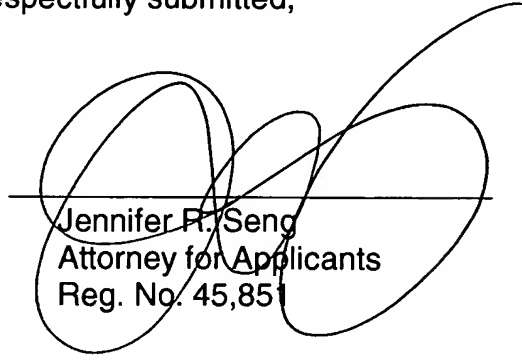
Accordingly, Kishida in view of Schrof and/or Long fails to teach or suggest all of the limitations of amended independent Claim 1, and this combination of references fails to render obvious amended independent Claim 1. Reconsideration and withdrawal of the Examiner's rejection is respectfully requested.

Claim 2 depends from and adds further limitations to amended independent Claim 1 and is respectfully deemed allowable at least for the same reasons in combination with amended independent Claim 1. Reconsideration is respectfully requested.

Applicants submit that the pending claims are in condition for allowance and notice to such effect is respectfully requested. Should the Examiner have any questions regarding this application, the Examiner is invited to initiate a telephone conference with the undersigned.

Respectfully submitted,

By



Jennifer P. Seng  
Attorney for Applicants  
Reg. No. 45,851

LANXESS Corporation  
Law & Intellectual Property Department  
111 RIDC Park West Drive  
Pittsburgh, Pennsylvania 15275-1112  
(412) 809-2233  
FACSIMILE PHONE NUMBER:  
(412) 809-1054

\\sr\\S:\\Law Shared\\SHARED\\NK\\PATENTS\\8046\\8046 Response 12-01-06.DOC